

### Claims

1. A data switch having a plurality of ports, and a switching fabric for transferring data packets received at one of the ports to another of the ports specified by a header of the data packet, each of the ports being associated  
5 with one or more queues for data packets, the data switch further including:  
  
a memory divided into packet buffers;  
  
a plurality of registers;  
  
a control unit for determining whether a data packet to be stored in one  
of the queues meets a criterion for efficient storage in the packet buffers, and  
10 otherwise dividing the data packet into a first portion which is stored in the  
packet buffers and a second portion which is stored in the registers.
2. A data switch according to claim 1 in which the criterion for efficient  
storage is whether the length of the data packet is greater by more than a  
threshold than an integer multiple of the size of the packet buffers.
- 15 3. A data switch according to claim 2 further comprising a memory storing  
the threshold value.
4. A data switch according to claim 1 which is arranged initially to store  
the data packet in the packet buffers and, upon the control unit making a  
negative determination, to transfer the second portion of the data packet from  
20 the packet buffers to the registers.
5. A data switch according to claim 1 in which, if the determination is  
negative, the control unit transmits the second portion of the data packet to  
the registers without it having been stored in the memory.
6. A data switch according to claim 1 which is an Ethernet switch.